REMARKS

Upon entry of the present amendment, claims 1-26 will be pending in the application. Claim 25 has been amended, and no claims have been added or canceled, leaving claims 1-26 for consideration upon entry of the present amendment

Claim 25 has been amended to recite that the surface temperature adjustments in steps b and d are effected by "using chill rolls". Support is found at least on p. 34, ll. 17-19, p. 36, ll. 1-3, and p. 37, ll. 4-7.

Amendments to, cancellation of, and additions to, the claims, as set forth above, are made in order to streamline prosecution in this case by limiting examination and argument to certain claimed embodiments that presently are considered to be of immediate commercial significance. Amendment or cancellation of the claims is not in any manner intended to, and should not be construed to, waive Applicants' right in the future to seek such unamended or cancelled subject matter, or similar matter (whether in equivalent, broader, or narrower form) in the present application, and any continuation, divisional, continuation-in-part, RCE, or any other application claiming priority to or through the present application, nor in any manner to indicate an intention, expressed or implied, to surrender any equivalent to the claims as pending after such amendments or cancellations.

Reconsideration and allowance of the claims are respectfully requested in view of the above amendment and following remarks.

1. Rejection of claims 1-8, and 10-26 under 35 U.S.C. §103(a) as being obvious over U.S. Patent Application 2004/0175572 A1 to Hintze-Bruning et al., hereafter "Hintze-Bruning" in view of U.S. Patent No. 5,011,881 to Fujii et al., hereafter "Fujii".

Hintze-Bruning generally discloses a multilayer color and/or effect film which comprise at least one color and/or effect layer comprising: (1) at least one component layer (1) comprising at least one color and/or effect pigment (1) in anisotropic distribution, and (2) at least one component layer (2) comprising the pigment or pigments (1) and/or at least different color and/or pigment (2) in isotropic distribution (p. 2, ¶ 19-21). The film may also have a clearcoat (p. 6, ¶107).

Fujii generally discloses an aqueous thermoplastic coating composition for coating plastics substrates, the composition consisting essentially of (A) an aqueous acrylic resin and (B) a urethane resin emulsion (Abstract). A transparent top-coat composition containing the coating material(s) dissolved or dispersed in an organic solvent can be applied on the coating formed from the aqueous coating composition (col. 7, ll. 28-32).

The PTO concedes that "Hintze-Bruning does not teach the specifically adjusting the temperature of the basecoat film before applying the clearcoat, specific residual volatile contents of the basecoat and clearcoat and specific drying rates, as required by claims 1-8 and 21-24."

The PTO alleges however,

> It would have been obvious to a person ordinarily skilled in the art at the time of the invention to heat the basecoat and clearcoat films to adjust the volatiles content to 3-10% by weight, to employ the average drying rates of 1-40% by weight/minute and to adjust the temperature to 50-35 degrees Celsius, as required by claims 1, 3, 5, 7 and 21-26. One would have been motivated to employ the drying percentages and average drying rates required because Hintze-Bruning and Fujii teach drying of both the basecoat and clearcoat at various temperatures in the same ranges as provided in the applicant's specification.

(*Office Action of 8/6/09, p. 4, first full para.*)

Applicants greatly appreciate the detailed basis of rejection, but must respectfully disagree. Hintze-Bruning discloses a drying temperature of 120°C for a second basecoat layer (¶ 139), but is silent on the drying temperatures for the first basecoat layer and the clear coat layer. Therefore Hintze-Bruning does not teach drying both the basecoat and clearcoat at various temperatures in the same ranges as provided in the Applicant's specification.

Moreover, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of

ordinary skill in the art, to modify the reference or to combine reference teachings. Finally, there must be a reasonable expectation of success.

The rejection does not meet the first criterion for a *prima facie* case of obviousness, which is that the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, e.g., *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003); *In re Royka*, 490 F.2nd 981, 985 (C.C.P.A. 1974). The cited references do not teach the specific residual volatile contents of the basecoat and clearcoat and the specific drying rates, as required by claims 1-8 and 21-26.

Nor does the rejection meet the second criterion for a *prima facie* case of obviousness. There is no suggestion or motivation to combine the teachings of Hintze-Bruning and Fujii. The mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Fritch,* 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

Hintze-Bruning discloses a multilayer sheet which is cured and wound to form a roll before application to a substrate. The skilled person in the art knows that these multilayer sheets are cut into appropriate sizes, and used as color and/or effect coatings. The finished multilayer sheets are used to coat three-dimensional surfaces by lamination onto metal surfaces, or by injection or compression back-molding onto thermoplastics. In these processes, the solid films are necessarily highly stretched to conform to the surface of the three-dimensional substrate or mold.

Fujii, on the other hand, does not teach multilayer coating films which are cured and subsequently applied to three-dimensional surfaces. In Fujii, the individual paint layers are applied directly onto three-dimensional plastic substrates. Plastic sheets are not the intended plastic substrates. Nowhere in Fujii is there reference to plastic sheets or films as substrates. The intended substrates are disclosed in col. 6, ll. 64-68:

> Examples of especially suitable plastics articles to be coated with the aqueous composition of the invention are the body panels and the components of motor vehicles such as automobiles, busses, trucks, etc.

Applicants respectfully submit that the coating of three-dimensional plastic substrates by directly applying the paint composition in liquid form to the substrate as taught by Fujii is fundamentally different than applying the paint layers to a plastic sheet,

conditioning, curing, and then applying the cured multilayer sheet to the three-dimensional substrate as taught by Hintze-Bruning. One major difference is the requirement for considerably thicker basecoats and clearcoats for multilayer sheets which Applicants teach, i.e, (p. 5, ll. 7-13 of the present application):

> Since the known color and/or effect films are highly stretched when used for coating three-dimensional substrates, especially automobile bodies and modules and exterior mounted components on them, it is necessary for their basecoats and clearcoats to be considerably thicker than conventional basecoats and clearcoats, . . .

The skilled person in the art knows coating thickness is an important factor that determines drying rates and times. Therefore the skilled person in the art knows that drying conditions must be adjusted to take into account coating thickness in order to obtain high quality coatings free of defects. The skilled person in the art also appreciates the fundamental differences between these two methods of coating three-dimensional surfaces, especially the required differences in coating layer thickness. The skilled person would not be motivated to apply any of the drying conditions disclosed in Fujii, which are optimized for liquid coatings applied directly to three-dimensional articles, to the production of the multilayer films and subsequent application of the films to three-dimensional articles as taught by Hintze-Bruning. Rather, he would realize it is necessary to find drying conditions particularly suited to the production of multilayer color sheets.

In response to Applicants' position that the cited references fail to provide motivation for their combination, the PTO contends

> In this case one would be motivated to combine Hintze-Brunning with Fujii because both teachings are drawn to coatings to be used for body panels of motor vehicles which have no solvent or a low solvent content due to environmental concerns. Fujii teaches the advantage that its method is better than a two coat one bake method, which is the type of method taught by Hintze-Brunning, because it provides surface smoothness, distinctness of image gloss and weatherability better than such a coating (Fujii col. 1, lines 52-60).
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> (*Office Action of 8/6/09, para. spanning pp. 6 and 7*)

Applicants respectfully disagree. Fujii does in fact teach a two coat one bake method (Abstract). The improvement of Fujii is replacement of a "conventional organic solvent-diluted thermosetting base-coat composition" with a "novel aqueous thermoplastic coating composition" in a two coat one bake method, *not* replacement of the two coat one bake method itself. Thus Fujii provides motivation for replacing a solvent-based basecoat with an water-based basecoat, but provides no motivation for using drying conditions suitable for coatings directly applied to substrates for the preparation of the multilayer films of Hintze-Bruning. As set forth above, the skilled person would realize that the drying conditions for direct application of a coating to a substrate are not necessarily applicable to the production of multilayer color sheets which are subsequently applied to a substrate. Instead, the skilled person would consider it necessary to find drying conditions particularly suited to the production of multilayer color sheets.

Also in response to Applicants' position that the cited references fail to provide motivation for their combination, the PTO contends

> In response to applicant's argument that the references are not combinable because Hintze-Brunning teaches a film forming method for making a sheet and Fujii teaches a direct application method to the substrate, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See Ex parte Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). In this case, it would be obvious to a person ordinarily skilled in the art to modify a direct application method to make a sheet instead because a sheet containing the coating composition could be easily applied to the substrate or could be attached to a substrate which can be molded into the desired part at a latter time and may be used for a plurality of different parts.
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> (*Office Action of 8/6/09, p. 7, first full para.*)

Applicants appreciate the detailed basis of rejection, but request clarification. What advantage flowing naturally from following the suggestion of the prior art is intended by the PTO? The advantage of making a multilayer sheet versus direct application of a coating is implied. This argument begs the question of motivation for using the drying conditions of Fujii in the multilayer sheets of Hintze-Bruning, which is

the basis of the PTO's initial rejection (Office Action of 8/6/09, pp. 2-4). At issue is not the advantages of using a multilayer sheet instead of direct application, but what is the motivation for using the drying conditions of Fujii in the multilayer sheets of Hintze-Bruning? As set forth above, the skilled person would realize that the drying conditions for direct application of a coating to a substrate are not necessarily applicable to the production of multilayer color sheets and then application of the sheets to a substrate.

Finally, the rejection does not meet the third criterion for a *prima facie* case of obviousness. There is no suggestion in the cited art that the combination of specific residual volatiles contents of the basecoats and clearcoat and the specific drying rates in the instant claims would be successful in affording multilayer sheet with the desired properties set forth in the application.

"The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that [the proposed modification] should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art." *In re Dow Chemical Co.,* 837 F.2d 469, 473 (Fed. Cir. 1988). "Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure." *Id.*

Several problems have long been associated with the production of multilayer sheets comprising color and/or effect coatings in particular, and these problems are solved by the process of the present application. The problems associated with multilayer sheets arise from the higher coating thicknesses employed (p. 5, ll. 7-21 of the present application):

> Since the known color and/or effect films are highly stretched when used for coating three-dimensional substrates, especially automobile bodies and modules and exterior mounted components on them, it is necessary for their basecoats and clearcoats to be considerably thicker than conventional basecoats and clearcoats, . . . However, increasing the dry film thickness leads to a series of problems during the production and application of the known color and/or effect films , and these problems mount up to form a considerable barrier to the production of class A surfaces.

The problems include sinking of the clearcoat into the basecoat, leading to dulling of the clearcoat (p. 6, ll. 22-24); "surface defects on the clearcoat immediately after drying" (p.

7, ll. 22-24); "surface defects during the storage of the sheet, as a result of diffusion, for example leading to waviness in the clearcoat" (p. 7, ll. 26-28); "surface defects during the final curing of the clearcoat film, leading to pops" (p. 8, ll. 1-2); blistering during thermoforming (p. 8, l. 5-6); excessive adhesion to the protective sheet (p. 8, l. 7); and leveling problems occurring when the second basecoat film and clearcoat films are applied (p. 11, l. 28 to p. 12, l. 2).

It is entirely unexpected that the combination of the specific residual volatiles contents of the basecoats and clearcoat and the specific drying rates in the claims of the present application would be successful in affording multilayer sheets having none of the foregoing problems. It is especially unexpected that problems that occur after drying and curing of the multilayer sheets are solved by the specific combinations of residual solvent levels and drying rates, for example surface defects during the storage of the sheet which leads to waviness in the clearcoat, blistering during thermoforming; and excessive adhesion to the protective sheet.

It is respectfully submitted that a *prima facie* case of obviousness over Hintze-Bruning in view of Fujii has not been made because the case fails on all three of the foregoing criteria.

The Examiner further alleges however,

> Since the drying temperature is one parameter that can be changed for various embodiments of the inventions and directly affect the volatile contents weight percentage and the drying rate, the volatile contents weight percent of the dried film and drying rates are considered to be cause effective variables. It is well settled that the determination of optimum values of cause effective variables such as the volatile contents weight percentage of the dried films and drying rates is within the skill of one practicing in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980)
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> (*Office Action of 8/6/09, p. 4, first full para.*)

Applicants request clarification of the PTO's use of the term "cause effective variables". This term could not be found in a careful reading of the cited case law. The PTO's use of the term "cause effective variables" is taken to refer to "result effective variables", the usage found in the cited case law.

Applicants greatly appreciate this detailed basis of rejection, but must respectfully disagree. While the drying temperature may affect variables such as drying rates, and when coupled with a specific period of time, the volatile contents weight percent of the dried film, it has not been heretofore recognized that volatile content weight percent and drying rates are result effective variables that affect the multitude of beneficial film properties obtained with the process of the present application.

Where the prior art has not recognized the "result effective" capability of a particular invention parameter, no expectation would exist that optimizing the parameter would successfully yield the desired improvement. *In re Antonie*, 559 F.2d 618, 195 U.S.P.Q. 6 (C.C.P.A. 1977).

There can be no inference from the disclosure of Fujii for example, that surface defects during the storage of the sheet which lead to waviness in the clearcoat, blistering during thermoforming; and excessive adhesion to the protective sheet depend on volatile content weight percent and drying rates because Fujii does not disclose the multilayer sheets for which these problems are unique. The coatings of Fujii are not applied to thin sheets, they are not stored in rolls, they are not thermoformed, and they are not covered with a protective sheet.

Even though Hintze-Bruning discloses multilayer sheets, there is no disclosure therein of volatile content weight percent and drying rates. There is also no disclosure in Hintze-Bruning of the problems of sinking of the clearcoat into the basecoat, leading to dulling of the clearcoat; surface defects on the clearcoat immediately after drying; surface defects during the storage of the sheet, as a result of diffusion, for example leading to waviness in the clearcoat; surface defects during the final curing of the clearcoat film, leading to pops; blistering during thermoforming; excessive adhesion to the protective sheet; and leveling problems occurring when the second basecoat film and clearcoat films are applied. Applicants respectfully submit that the skilled person in the art would not recognize from the teachings of Hintze-Bruning that volatile content weight percent and drying rates are result effective variables if neither the variables themselves nor the results dependent on the variables are disclosed therein.

Even if it were evident from the teachings of Hintze-Bruning and Fujii that drying rates and the volatile contents weight percent of the dried film are result effective

variables for obtaining multilayer sheets free of surface defects, which is not conceded, the results of optimizing these variables to achieve a multitude of beneficial multilayer sheet properties simultaneously is an unexpected and surprising result.

Although it is well-established that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art", *In re Boesch*, 205 U.S.P.Q. 215, 219 (C.C.P.A. 1980), it is equally well-established that a *prima facie* case of obviousness may be rebutted "where the results of optimizing a variable, which was known to be result effective, [are] surprisingly good." *Id.*, citing *In re Antonie*, 195 U.S.P.Q. 6, 8-9 (C.C.P.A. 1977) and cases cited therein.

The process parameter ranges cited in the claims afford multilayer films in which all of the following problems are simultaneously eliminated: sinking of the clearcoat into the basecoat, leading to dulling of the clearcoat (p. 16, ll. 11-14); dulling of the clearcoat arising from surface defects formed on the clearcoat immediately after drying (p. 16, ll. 22-24); waviness in the clearcoat arising from surface defects during the storage (p. 16, ll. 26-27); pops arising from surface defects formed during the final curing of the clearcoat film (p. 17, ll. 1-2); blistering during thermoforming (p. 17, ll. 4-6); excessive adhesion to the protective sheet (p. 17, ll. 6-8); and leveling problems occurring when the second basecoat film and clearcoat films are applied (p. 17, ll. 10-13). Applicants respectfully submit that it is a surprising result that all of these problems were not only minimized, but were completely eliminated by employment of the drying rates and the volatile contents weight percent of the dried film as recited in the claims.

Regarding claims 3, 5, 7, 23, and 24, neither Hintze-Bruning nor Fujii, alone or in combination, teach or suggest two distinct drying sections for the process for preparing a multilayer film, let alone teach that the number of distinct drying sections is a result effective variable for the desired sheet properties. Again, for a *prima facie* case of obviousness, the prior art reference (or references when combined) teach or suggest all the claim limitations in these claims, *prima facie* case of obviousness has not been made.

Claims 3, 5, and 7 recite two stage drying sections for the basecoat films 1a and 2a, and clearcoat film 3a, respectively. Claims 23 and 24 also recite two stage drying sections for the clearcoat film 3a. The specific drying conditions for the two drying sections for basecoat films 1a and 2a, and clearcoat film 3a, are each different. For

example, for basecoat film 1a, the first drying section employs an average drying rate of 10 to 40% by weight/min, based on the total volatiles content of the applied basecoat film, until the residual volatiles content x is 12 to 30% by weight, based on the basecoat film, and the last drying section employ san average drying rate of 1 to 6% by weight/min, based on the total volatiles content of the applied basecoat film, until the residual volatiles content x is less than 10% by weight, based in each case on the basecoat film. Neither Hintze-Bruning nor Fujii, alone or in combination, teach or suggest two stage drying sections for the basecoat and clearcoat films. The PTO has not provided any reasons as to why the two stage drying process recited in these claims might be obvious.

The PTO further alleges

> It would have been obvious to a person ordinarily skilled in the art at the time the of the invention to cool the basecoat and clearcoat films to a temperature [of] 50-35 degrees Celsius, as required by claims 1, 4, 6, 8, 25 and 26. One would have been motivated to adjust the basecoat temperature to 35-50 degrees Celsius because Fujii teaches that the basecoat is to be cooled to room temperature, which is understood to be about 30 degrees Celsius. One would have been motivated to adjust the clearcoat temperature after coating to less than 50 degrees Celsius because Fujii teaches letting the coating cool in a chamber at a temperature of -30 degrees Celsius in a preferred example, which is well below the required temperature.
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> (*Office Action of 8/6/09, para. spanning pp. 4 and 5*)

Applicants greatly appreciate this detailed basis of rejection, but must respectfully disagree. First, room temperature is not generally understood to be 30 degrees Celsius. The American Heritage Dictionary of the English Language: Fourth Edition (2000) defines room temperature as an indoor temperature of from 20 to 25°C (68 to 77°F), not 30°C. Even putting aside the dictionary definition, the skilled person in the art would interpret "cooled to room temperature" in the case of Example 4 of Fujii (col. 10, l. 44 to col. 11, l. 9) to mean cooled to the ambient conditions under which the test piece was sprayed, which was 25°C (col. 10, l. 59). Also, the temperature of -30°C cited by the PTO refers to conditioning of the test piece after coating, but prior to conducting low

temperature flexibility testing (col. 11, ll. 26-40). This temperature is not the temperature that the coatings were cooled to prior to spray application of subsequent coating layers.

Moreover, as discussed above, the skilled person will appreciate the differences between the coating methods of Hintze-Bruning and Fujii, and would not be motivated to look to the drying conditions disclosed in Fujii for liquid coatings applied directly to three-dimensional articles for guidance on drying conditions for the production of the multilayer sheets of Hintze-Bruning.

Finally, it is a surprising result that individual wet coating layers do not have to be cooled all the way down to room temperature. It is surprising that cooling to a temperature of less than 50°C (claims 1 and 8), or less than 35°C (claim 4 and 6) is sufficient to obtain multilayer sheets with excellent properties.

"Usually, a showing of unexpected results is sufficient to overcome a *prima facie* case of obviousness. See e.g. *In re Albrecht*, 514, F.2d 1289, 1396, 185 USPQ 585, 590 (CCPA 1975)" MPEP 2145.

It is surprising that cooling the wet coating layers to temperatures as high as 35-50°C affords multilayer sheets free of surface defects. The skilled person in the art knows that the higher the temperature of the coating layers, the lower their viscosity, and the more readily they will flow. The skilled person also knows that diffusion is greater at higher temperatures. Thus there is more likely to be "sinking", or diffusion of the clearcoat layer into the basecoat layer of the multilayer sheet at higher temperatures. It is surprising that despite the expected lower viscosity of the wet coating layers and the higher diffusion rates at these higher temperatures, multilayer sheets free of surface defects are still obtained. Therefore it is not obvious that the individual wet coating layers can be cooled to temperatures of 35-50°C and still afford a multilayer sheet free of surface defects.

In response to Applicants' arguments with respect to surprising results, the PTO contends

> In particular, the Applicant states that the process produces unexpected or surprising results. However, the results are not clearly or distinctly shown in the Applicant's specification. Data showing the unexpected results of the claimed process would clearly point out the patentable novelty which the Applicant thinks the claims present in view of the state

> of the art. In this case, it is of the Examiner's opinion that the "adjusting of the volatiles content" required in the claims is merely the same as drying the respective films to a specific degree. Therefore, it would be obvious to a person ordinarily skilled in the art to obtain the specified volatiles contents simply by optimizing the drying processes.
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> (*Office Action of 8/6/09, para. spanning pp. 7 and 8*)

Applicants respectfully disagree. It is the specified volatiles content itself, which the PTO has acknowledged is not taught by the cited references, which in part affords unexpected results. An enumeration of the unexpected results of Examples 1 and 3 is found on p. 37, ll. 12-26 of the application as filed:

> The multilayer sheets S1 to S3 were able to be wound to form rolls without problems and to be stored and/or transported before their subsequent use, without detriment to their outstanding performance properties, in particular their dimensional stability on the one hand and their deformability on the other. There were no problems in cutting them into sections. It was possible to weld the sections into airtight and moisturetight films and to store them in that form for months.
>
> The multilayer sheets S1 to S3 were outstandingly suitable for producing class A surfaces on automobile bodies and for producing modules and exterior mounted components having class A surfaces.

Applicants' respectfully submit that these unexpected results are not readily quantified, many relating to rating the coatings visually, and request that the Applicants' visual observations be taken into consideration. The unexpected result of a class A surface means the absence of the following phenomenon: sinking of the clearcoat into the basecoat, leading to dulling of the clearcoat (p. 6, ll. 22-24 of the application); "surface defects on the clearcoat immediately after drying" (p. 7, ll. 22-24); "surface defects during the storage of the sheet, as a result of diffusion, for example leading to waviness in the clearcoat" (p. 7, ll. 26-28); "surface defects during the final curing of the clearcoat film, leading to pops" (p. 8, ll. 1-2); blistering during thermoforming (p. 8, l. 5-6); excessive adhesion to the protective sheet (p. 8, l. 7); and leveling problems occurring when the second basecoat film and clearcoat films are applied (p. 11, l. 28 to p. 12, l. 2). Absence of difficulties in cutting the sheets into sections, and welding the sections into air tight and moisture tight sheets, and in storage are likewise not readily quantified, and

yet are unexpected beneficial properties that were confirmed by visual observation. Applicants respectfully submit that it is a surprising result that all of these problems were not only minimized, but were completely eliminated, as evidenced by visual observation, by employment of the drying rates and the volatile contents weight percent of the dried film as recited in the claims.

The PTO concedes, "The continuous clearcoating method is not taught by Hintze-Bruning in view of Fujii, as required by claim 12. Also, curing the multilayer sheets after joining with the substrates by thermal curing, as required by claim 18, is not taught."

The PTO alleges however,

> It would have been obvious to a person ordinarily skilled in the art at the time of the invention to modify the process for producing a multilayer sheet taught by Hintze-Bruning in view of Fujii to include curing the multilayer sheet after joining with a substrate, as required by claim 18. One would have been motivated to make this modification because the transposition of process steps, where the processes are substantially identical or equivalent in terms of function, manner, and result, was held to not patentably distinguish the processes. *Ex parte Rubin*, 128 USPQ 159 (PO BdPatApp 1959).

(Office Action of 8/6/09, third full para.)

Applicants greatly appreciate this detailed basis of rejection, but must respectfully disagree. In this case it is surprising that the transposition of process steps as recited in claim 18 still affords multilayer sheets free of surface defects. Claim 18 necessarily requires the multilayer sheet is uncured or partly cured when it is stored prior to joining with the substrate. If the multilayer sheet is not used immediately, "the multilayer sheet S is wound to form a roll or is cut into smaller sections. The roll can be stored and/or transported until the multilayer sheet is used further" (p. 31, ll. 1-4 of the application as filed).

The application further discloses that surface defects can occur during the storage of the sheet as a result of diffusion between or within the uncured or partly cured coating layers, for example sinking of the clearcoat into the basecoat, leading to dulling of the clearcoat (p. 6, ll. 22-24) and waviness in the clearcoat (p. 7, ll. 26-28). These problems are expected to be worse when the coating is uncured or partly cured. It is surprising the

surface defects are eliminated even when the multilayer sheet is uncured or partly uncured. Therefore, it is not obvious that curing of the multilayer sheet after storage and joining with the substrate will still afford multilayer sheets free of surface defects.

The Applicants also appreciate the detailed bases of the rejections of claims 9 and 12, but these rejections are moot because both claims are dependent upon claim 1, which is believed to be patentable for other reasons set forth above.

Claim 25 has been amended to recite that the surface temperature adjustments in steps b and d is effected by "using chill rolls". Hintze-Bruning is silent on surface temperature adjustments between application of coating layers and curing. Fujii is silent on "using chill rolls" to effect cooling. Since neither reference teaches or suggests the use of chill rolls to make temperature adjustments, it is respectfully submitted that claim 25 as herein amended is not obvious over the references.

For all of the above reasons, independent claims 1, 16, and 25, and claims 2-15, and 17-24, and 26, which depend therefrom, are believed to be patentable over Hintze-Bruning in view of Fujii. Reconsideration and removal of the obviousness rejection of these claims is therefore respectfully requested.

CONCLUSION

Applicants respectfully submit that the Application and pending claims are patentable in view of the foregoing remarks. A Notice of Allowance is respectfully requested. As always, the Examiner is encouraged to contact the Undersigned by telephone if direct conversation would be helpful.

Respectfully Submitted,

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